

Docket No: AF01194**Serial No. 10/731,494****REMARKS**

Upon entry of the present Reply, claims 1 and 3-21 are pending in the application. Claim 1 is amended, claim 2 is canceled, and new claim 21 is submitted herein. Support for the new claim is found, for example, in the claims as originally filed.

Applicants thank the Examiner for his careful consideration of the present application. Applicants note with appreciation the indication that claims 2, 7, 11 and 16 would be allowable.

For the reasons set forth below, Applicants respectfully request reconsideration of the application, withdrawal of the asserted rejections of Applicants' claims, and allowance of all presently pending claims.

Rejection of Claims over Tanaka et al.

Claims 1, 3-6, 8-10, 12-15 and 17-20 stand rejected over U.S. Patent No. 6,767,796 B1 to Tanaka et al. Applicants respectfully traverse the rejection of these claims over Tanaka et al. for the reasons set forth in the following.

Claims 1-9 Are Allowable.

Claim 1 has been amended to incorporate the subject matter of claim 2, which was indicated as allowable. Claim 2 has been canceled. Accordingly, Applicants respectfully submit that claims 1 and 3-9 are allowable. Therefore, these claims will not be further addressed in the following.

Claims 10-20 Are Neither Anticipated Nor Obvious over Tanaka et al.

Claims 10, 17 and 18 stand rejected as anticipated by Tanaka et al. and claims 3-6, 12-15, 19 and 20 stand rejected as obvious over Tanaka et al. Applicants traverse the rejections of these claims for at least the following reasons. Applicants respectfully submit that the Examiner's view of Tanaka et al. is clearly erroneous.

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Tanaka et al. teaches in one embodiment, a method of manufacturing a DRAM element. A DRAM element is not and does not include a charge trapping dielectric charge storage layer. The method of Tanaka et al. includes formation of an SiN film 405 (col. 11, lines 9-61). The SiN film 405 is a hard mask layer. The hard mask layer is not a spacer layer. Thus, two specific elements of Applicants' claimed invention are missing from Tanaka et al. Tanaka et al. cannot anticipate the presently claimed invention for this reason. Similarly, since Tanaka et al. fails to disclose all the elements of Applicants' claimed invention, Tanaka et al. cannot have rendered obvious the claimed invention. Accordingly, Applicants request the Examiner to withdraw the rejections of Applicants' claims 10 and 19, and the rejections of the claims dependent thereon, and to indicate the allowance of all of the pending claims.

With specific respect to the independent claims 10 and 19, which of course applies equally to the claims dependent thereon, Applicants respectfully submit that the Examiner failed to state a *prima facie* case of anticipation with respect to claim 10, and failed to state a *prima facie* case of obviousness with respect to claim 19, because the Examiner failed to identify all of the limitations of these claims in Tanaka et al.

Tanaka et al. fails to disclose or suggest a charge trapping dielectric charge storage layer. Both claim 10 and claim 19 relate to a semiconductor substrate having formed thereon a gate stack comprising a charge trapping dielectric charge storage layer. This is a central element of the claimed invention of these claims. Tanaka et al. simply fails to disclose or suggest any semiconductor device comprising a charge trapping dielectric charge storage layer.

Tanaka et al. fails to disclose or suggest a spacer layer formed over a gate stack comprising a charge trapping dielectric charge storage layer. Both claim 10 and claim 19 further include a spacer layer formed over the gate stack comprising a charge trapping dielectric charge storage layer. This too is a central element of the claimed invention. Tanaka et al. simply fails to disclose or suggest any semiconductor device comprising a spacer layer formed over a gate stack comprising a charge trapping dielectric charge storage layer.

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Because Tanaka et al. fails to disclose or suggest two essential elements of the inventions claimed in claims 10 and 19, there can be neither anticipation of claim 10 nor obviousness of claim 19.

For this reason, Applicants respectfully submit that the Examiner failed to state a *prima facie* case of anticipation with respect to claim 10, and failed to state a *prima facie* case of obviousness with respect to claim 19. Having failed to carry the burden of stating a *prima facie* case of unpatentability, Applicants respectfully submit that Applicants are entitled to allowance and issue of a patent on the presently claimed invention. The Examiner is respectfully requested to reconsider and withdraw the rejections of claims 10, 12-15 and 17-20.

With respect to claims 8, 9, 17 and 18, Applicants respectfully traverse the rejection of these claims for the additional reason that since Tanaka et al. fails to teach a spacer layer formed over a gate stack as defined in Applicants' claims, Tanaka et al. cannot possibly teach applying a treatment to such layer. Applicants respectfully request withdrawal of the rejection of claims 8, 9, 17 and 18 for this additional reason.

With respect to claims 15 and 21, even if it is assumed for the sake of argument only that Tanaka et al. teaches the other limitations, Tanaka et al. fails to disclose or suggest that the hydrogen content is reduced to substantially zero or is not detectable by FTIR. To the contrary, Tanaka et al. teaches in Fig. 17 and the associated text that the treated material does contain a FTIR-measurable quantity of hydrogen. See col. 11, lines 49-61. Applicants respectfully submit that claim 15 and new claim 21 are both allowable for this additional reason.

With respect to claims 13, 14 and 20, even if it is assumed for the sake of argument only that Tanaka et al. teaches the other limitations, Tanaka et al. fails to disclose or suggest that the hydrogen content is reduced to the levels set forth in these claims. Applicants respectfully submit that claims 13, 14 and 20, and claim 19 to the

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extent it includes the same feature recited in claim 13, are all allowable for this additional reason.

With respect to the remaining claims, Applicants respectfully submit that Tanaka et al. fails to disclose or suggest the specified hydrogen contents recited in these claims, in addition to the foregoing reasons.

CONCLUSION

Applicants respectfully submit that since all of the pending claims contain subject matter considered by Applicants as allowable, that all of the claims and the application as a whole are in condition for allowance. Notice to such effect is respectfully requested.

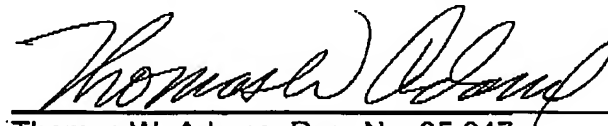
If the Examiner considers that a telephone interview would be helpful to facilitate favorable prosecution of this application, the Examiner is invited to telephone the undersigned at the Examiner's convenience.

No additional claims fees are believed due for the filing of this paper. However, if a fee is required, please charge the fee to Deposit Account No. 18-0988, Order No. AF01194.

Respectfully submitted,
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